

FACT SHEET FOR NPDES PERMIT NO. WA0037338
TRANSALTA CENTRALIA MINING LLC

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	3
GENERAL INFORMATION	3
BACKGROUND INFORMATION.....	4
DESCRIPTION OF THE FACILITY	4
Discharge Outfalls	4
PERMIT STATUS	4
SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT	5
WASTEWATER CHARACTERIZATION.....	5
PROPOSED PERMIT LIMITATIONS.....	7
TECHNOLOGY-BASED EFFLUENT LIMITATIONS	7
SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS.....	8
Narrative Criteria	8
Antidegradation	9
Description of the Receiving Water.....	9
Surface Water Quality Criteria	9
Human Health	9
GROUND WATER QUALITY LIMITATIONS	9
COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED JUNE 9, 2000.....	10
MONITORING requirements	10
LAB ACCREDITATION	10
OTHER PERMIT CONDITIONS	10
REPORTING AND RECORDKEEPING	10
SPILL PLAN	10
GENERAL CONDITIONS.....	10
PERMIT ISSUANCE PROCEDURES	10
PERMIT MODIFICATIONS	10
RECOMMENDATION FOR PERMIT ISSUANCE	11
REFERENCES FOR TEXT AND APPENDICES.....	12
APPENDIX A--PUBLIC INVOLVEMENT INFORMATION	13
APPENDIX B--GLOSSARY	14

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) of permits which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION

Applicant: TransAlta Utilities Corporation
110 12th Avenue SW
Box 1900, Station M
Calgary, Alberta, Canada T2P-2M1

Facility Name and Address: TransAlta Centralia Mining LLC
1015 Big Hanaford Road
Centralia, WA 98531-9100
USA

Type of Facility: Surface Coal Mine

SIC Code: 1221

Discharge Location: Hanaford Creek System

Outfall 001	Latitude: 46° 45' 08" N	Longitude: 122° 49' 47" W
Outfall 002	Latitude: 46° 45' 47" N	Longitude: 122° 49' 42" W
Outfall 003	Latitude: 46° 45' 45" N	Longitude: 122° 49' 45" W
Outfall 004	Latitude: 46° 45' 27" N	Longitude: 122° 49' 56" W
Outfall 005	Latitude: 46° 45' 42" N	Longitude: 122° 49' 59" W
Outfall 006	Latitude: 46° 45' 42" N	Longitude: 122° 49' 36" W
Outfall 008	Latitude: 46° 45' 23" N	Longitude: 122° 49' 04" W
Outfall 009	Latitude: 46° 30' 00" N	Longitude: 122° 51' 00" W

Mitchell Creek System

Outfall 011	Latitude: 46° 41' 45" N	Longitude: 122° 45' 31" W
-------------	-------------------------	---------------------------

Water Body ID Number: WA-23-1040

Hanaford Creek is a tributary of the Skookumchuck River, a tributary of the Chehalis River. Mitchell Creek is a tributary of the north fork of the Newaukum River, a tributary of the Chehalis River.

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

History: The TransAlta Centralia Mining LLC is located in an area where coal has been mined for over 100 years. When the price of electricity made large scale steam electric generation economically feasible in the early 1970s, this facility was opened and actively mined to provide coal to the adjacent generating station. It has been mined since 1971 when electrical generation began. The Department archives show that the mine has had a NPDES permit since at least the early 1980s. This mine is a NPDES major facility. The treatment system for the mine consists of sedimentation ponds built under the supervision of the federal Office of Surface Mining and the Washington State Department of Ecology Dam Safety section. Due to the ongoing mining, these ponds are built as excavation progresses and abandoned (at least as outfalls) as reclamation progresses.

At this site approximately 6 million tons of coal is mined and processed annually for use in the adjacent steam electric generating facility. The coal is washed to improve its quality as fuel by removing non-flammable minerals. Since the existing permit was issued, the coal washing facility has been revised with a new clarifier installed. Coal is brought to the processing facility in trucks where it is washed for use in the boilers. The facility employs approximately 565 workers operating 24 hours a day, seven days a week in three shifts. The mining permit covers 14,450 acres. The mine stores the usual petroleum products for the operation of diesel engine powered mining equipment and coal processing machinery. Of the ten outfalls from sedimentation ponds, all treat runoff from active or partially reclaimed mining areas and two (#001 and #002) treat runoff from both the surface and coal wash water from the coal processing area (see discharge outfalls below).

DISCHARGE OUTFALLS

There are several outfalls in this system. All of these outfalls discharge runoff from the mined areas which is treated by flocculation and sedimentation. Outfall 001 and 002 may discharge storm runoff in excess of the hydraulic capacity of the storm runoff ponds in the vicinity which are also used to treat coal washing water from the coal washing system. The hydraulic capacity of the Pond 3 System is designed to carry the average yearly rainfall and use this water in a recirculating system that treats the coal without discharge except during storm events. The discharge outfalls are all overflow structures from treatment ponds. The receiving waters are Hanaford Creek and its tributaries and Mitchell Creek and its tributaries. Hanaford Creek drains to the Skookumchuck River which in turn drains to the main stem of the Chehalis River. Mitchell Creek is a tributary of the north fork of the Newaukum River, a tributary of the Chehalis River. See the processing and pond flow schematics in Appendix C.

PERMIT STATUS

The previous permit for this facility was issued on June 9, 2000, and modified on November 30, 2000, and December 12, 2003. The previous permit placed effluent limitations on turbidity, total suspended solids (TSS), pH, dissolved oxygen, total petroleum hydrocarbons, temperature, and total iron.

An application for permit renewal was submitted to the Department on June 3, 2004 and accepted by the Department on June 21, 2004.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 4, 1994.

Performance Summary, Violations

Begin Date	Monitoring PT	Parameter	Value Type
1-Mar-02	9	IRON, TOTAL (AS FE)	AVM
1-Dec-01	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Jan-02	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Mar-02	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Dec-02	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Jan-03	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Feb-03	9	SOLIDS, TOTAL SUSPENDED	AVM
1-Dec-01	9	SOLIDS, TOTAL SUSPENDED	MXD
1-Jan-02	9	SOLIDS, TOTAL SUSPENDED	MXD
1-Mar-02	9	SOLIDS, TOTAL SUSPENDED	MXD
1-Jan-02	10	IRON, TOTAL (AS FE)	AVM
1-Dec-00	10	OXYGEN, DISSOLVED (DO)	MIN
1-Jan-02	10	PETROLEUM HYDROCARBONS, TOTAL RECOVERABLE	AVM
1-Dec-00	10	PH	MAX
1-Dec-00	10	PH	MIN
1-Dec-00	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Nov-01	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Dec-01	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Jan-02	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Feb-02	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Mar-02	10	SOLIDS, TOTAL SUSPENDED	AVM
1-Dec-00	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Nov-01	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Dec-01	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Jan-02	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Feb-02	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Mar-02	10	SOLIDS, TOTAL SUSPENDED	MXD
1-Dec-00	10	TEMPERATURE , WATER (DEG C)	AVM
1-Dec-00	10	TURBIDITY	AVM
1-Nov-01	10	TURBIDITY	AVM
1-Dec-01	10	TURBIDITY	AVM

WASTEWATER CHARACTERIZATION

OUTFALL NUMBER 001

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	9.7	7.04	10.4	0.24	<0.25	6.29	4.90
Maximum	16.2	7.98	13	0.60	<0.30	21.85	18.34

OUTFALL NUMBER 002

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	10.1	7.16	10.7	0.18	<0.25	5.0	4.76
Maximum	16.5	8.15	13.6	0.40	<0.30	11.7	10.72

OUTFALL NUMBER 003

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	9.9	7.06	10.3	0.26	< 0.25	3.56	3.45
Maximum	16.8	7.95	12.1	0.40	< 0.30	6.69	6.96

OUTFALL NUMBER 004

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	9.6	7.2	10.7	0.18	<0.25	2.58	2.26
Maximum	16.9	8.26	12.8	0.30	< 0.30	6.2	4.93

OUTFALL NUMBER 005

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	10.5	7.82	12.9	Not	Measured	1.83	1.4
Maximum	17.8	7.82	12.9			3.8	3.9

OUTFALL NUMBER 006

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	8.1	7.29	10.8	Not	Measured	2.72	1.98
Maximum	17.0	7.72	12.6			5.5	2.98

OUTFALL NUMBER 008

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	9.6	6.56	10.6	1.02	<0.25	4.37	4.42
Maximum	16.5	7.27	13.6	2.8	< 0.30	7.95	8.04

OUTFALL NUMBER 009

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	7.1	6.99	10.3	0.88	<0.25	24.33	13.12
Maximum	10.0	7.8	13.0	1.9	< 0.30	39.39	21.9

OUTFALL NUMBER 010

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	9.3	7.05	10.1	0.30	<0.25	3.86	2.96
Maximum	17.1	7.7	13.6	0.7	< 0.30	8.71	7.26

OUTFALL NUMBER 011

	Temperature °C	pH S.U.	D.O. mg/L	Total Iron mg/L	TPH mg/L	TSS mg/L	Turbidity NTU
Average	No Discharge						
Maximum							

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis and the limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported and they are not controllable at the source and they do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology Based Standards used in this permit for daily maximums are:

<u>Pollutant</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>
TSS	40 mg/L	20 mg/L
Iron	3.5 mg/L	3.5 mg/L
pH	Range 6 to 9 S.U.	Range 6 to 9 S.U.
Total Petroleum Hydrocarbons	15 mg/L	15 mg/L

The limits for pH are based on the categorical limits shown in the Code of Federal Regulations Title 40, Part 434, subpart B. This regulation also establishes a limit for iron and TSS, but this permit (and the

previous permit) uses a more restrictive limit based on prior demonstrated performance. The limit for iron is 3.5 mg/L for the daily maximum. The limit for TSS is 40 mg/L. The limit for Total Petroleum Hydrocarbons is based on the 1992 Stormwater Management Manual for the Puget Sound Basin, Washington Department of Ecology which sets these attainable limits based on prior experience for oil and grease removal. Best professional judgment assumes that this same limit is attainable for total petroleum hydrocarbons, the only oily substance of concern.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL). Turbidity, temperature and dissolved oxygen are regulated based on water quality limitations.

The temperature limits that stated as an increase over background only apply when the background temperature is over 18 degrees Celsius. In this case the treatment ponds outlets are shut off during hot weather so that the site becomes non-discharging. As a result, the temperature limit is set at 18 degrees Celsius.

The turbidity limit is set as an incremental increase at all levels of turbidity. As with temperature, the incremental approach to limit setting is sometimes made impractical due to the inaccessibility of the stream and the location of the sampling points at a considerable setback from the stream. The limits here are set based on the premise that if the turbidity at any one of the outfall locations set back from the main stem of the affected streams is less than the turbidity at a background point on the main stem, the treated effluent at the outfall cannot increase the turbidity of the main stem. To this end, background sampling points are set at Sample Point UNHC2 for Outfall 004 on North Hanaford Creek and Sample Point USHC for Outfalls 001,002, 005, 006,008, 009, 010 on Big Hanaford Creek. Outfalls 003 and 011 can, however, be conveniently sampled just upstream and downstream of the point where the discharge enters the affected water body. For Outfall 011, UMTC is the upstream sample point and LMTC is the downstream sample point. For Outfall 003, USHC is the upstream sample point and MSHC is the downstream sample point.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington. The following table shows the limits placed on this effluent that is based on narrative criteria. These limits are identical to the limits in the existing permit.

<u>Pollutant</u>	<u>Limit</u>
Dissolved Oxygen	Dissolved Oxygen shall not fall below 8 mg/L
Temperature	Temperature shall not exceed 18°C due to human activities. Incremental temperature increases shall not at any time exceed $t+28/(t+7)$.

ANTIDegradation

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Big Hanaford Creek and its tributaries, North Hanaford Creek, South Hanaford Creek, Packwood Creek, and Mitchell Creek, which are designated as "Class A" receiving waters in the vicinity of the outfalls. Significant nearby non-point sources of pollutants possibly include dairies. Characteristic uses include the following:

water supply (domestic, industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall exceed the requirements for all or substantially all uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Fecal Coliforms:	100 organisms/100 ml maximum geometric mean
Dissolved Oxygen:	8 mg/L minimum
Temperature:	18 degrees Celsius maximum or incremental increases above background
pH:	6.0 to 9.0 standard units
Toxics:	No toxics in toxic amounts

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the applicant's discharge is unlikely to contain chemicals regulated for human health.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED June 9, 2000.

No change in limits.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.1. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Monitoring frequency has been simplified to two separate intervals, monthly and once every two months.

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*. The laboratory at this facility is accredited for: Total Suspended Solids, Turbidity, and pH.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S2 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-220-210).

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. This plan has been submitted and accepted.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for

Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for a period corresponding to the watershed approach re-permitting cycle, that is to say until June 30, 2010.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA).

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(E2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on March 20, 2004 and March 27, 2004, in the *Daily Chronicle* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on February 16, 2005, in the *Daily Chronicle* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Industrial Unit Permit Coordinator
Department of Ecology
Southwest Regional Office – Water Quality
P.O. Box 47775
Olympia, WA 98504-7775.

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6285 or by writing to the address listed above.

This permit and fact sheet were written by Gary Anderson, P.E.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Daily Maximum Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10 percent by volume and the receiving water 90 percent.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

Monthly Average --The average of the measured values obtained over a calendar month's time.

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington state permit writers are joint NPDES/State permits issued under both state and federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

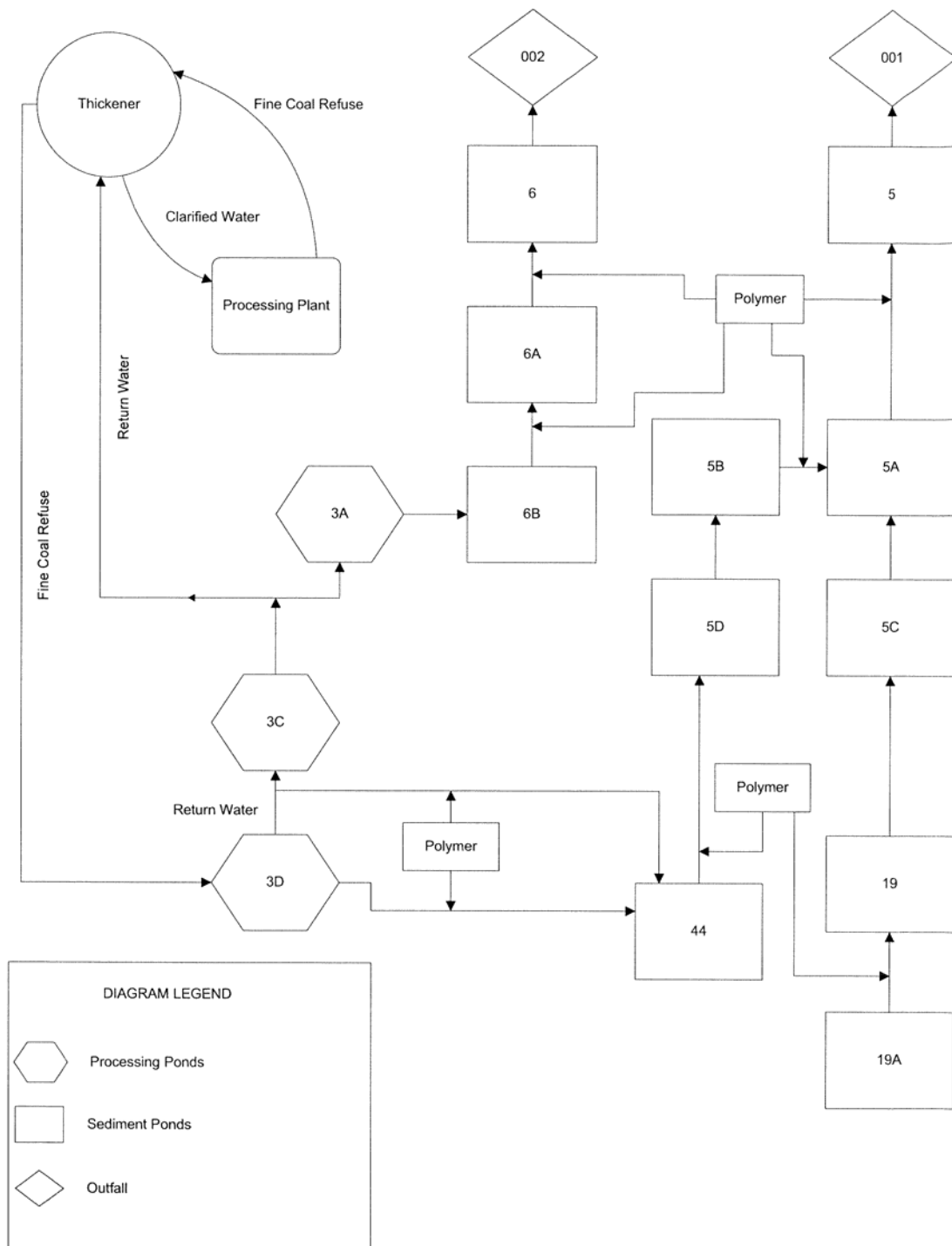
Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

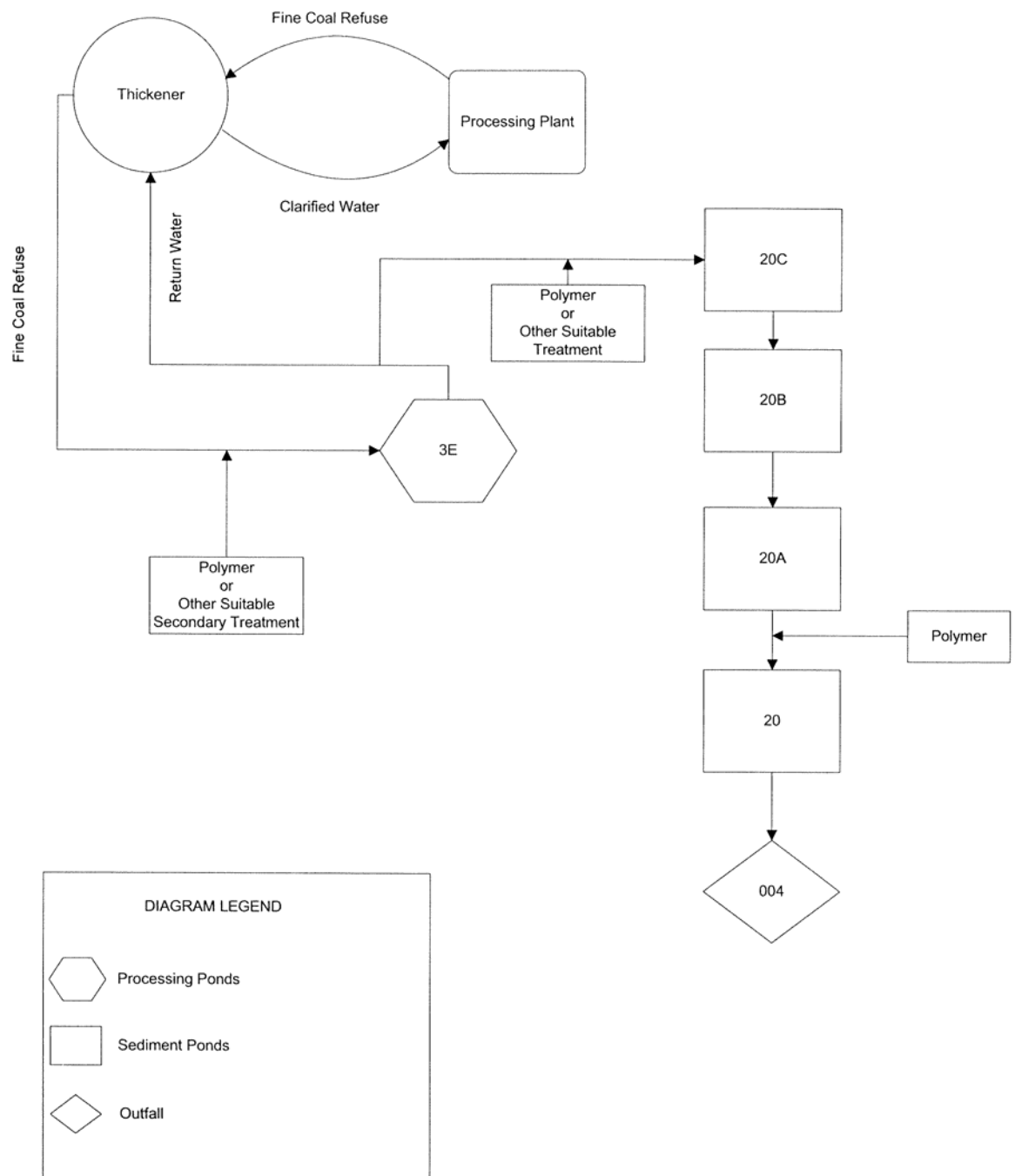
Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C – FLOW DIAGRAMS

2.1 - Pond 3D Processing and Pond Flow Diagram



2.2 - Pond 3E Processing and Pond Flow Diagram



APPENDIX D – RESPONSE TO COMMENTS

APPENDIX D-RESPONSE TO COMMENTS

**TRANSALTA CENTRALIA COAL MINE
 NPDES PERMIT NUMBER WA0037338**

Comment 1.

Ecology does not show the results of the priority pollutants required by the permit application form for this facility.

Response 1.

A pollutant scan has been done for the facility. A table showing the potentially toxic substances detected is shown below:

DETECTED SUBSTANCES CONCENTRATION

Units in µg/L

Substance	Outfall 002	Outfall 003	Outfall 004	Statutory Limit, WAC 173-201A	National Toxics Rule, FR 64, Nov 9, 1999	EPA 822-R-02-47
Nitrate/Nitrite	1300	600	ND			
N., Ttl Org.	600	500	300			
Phosphorus	20	20	40			
Sulfate	212,000	339,000	330,000			
Aluminum	383	468	549			750
Barium	48	49.8	12.2			
Boron	3380	130	206			
Cobalt	4.2	9.58	1.33			
Magnesium	12,200	16,800	24,200			
Molybdenum	6.4	0.1	0.6			
Manganese	414	876	210			50
Tin	0.1	0.1	0.1			
Titanium	26.8	22.2	28.8			
Antimony	0.15	0.05	0.07		14	
Arsenic	0.5	0.5	0.5	190		
Beryllium	0.04	0.04	0.03			
Cadmium	0.07	0.18	0.11	0.37		
Chromium	0.3	0.6	0.6	57		
Copper	2.3	2.6	3.4	3.5		
Lead	0.06	0.13	0.08	0.5		
Mercury	0.2	0.2	0.2	0.012		
Nickel	10.8	21.3	10.2	49		
Selenium	1.3	1.0	1.0	5		
Silver	0.02	0.02	0.05	1		
Thallium	0.02	0.02	0.02		1.7	
Zinc	11.1	13.8	10.0	32		

Of the above, obviously, there are several that have no official limits. Only manganese has a published limit and that limit is for potable water.

Comment 2.

Federal Regulation 40 CFR 424.23 requires that when pH of the wastewater is less than 6.0, that the concentration of manganese be limited.

Response 2.

- a. A steam electric power generating point source is considerably different from a covered electric furnace or other smelting operation with wet air pollution control equipment. It is a considerable stretch to require the former to meet the requirements of the latter.
- b. The Washington Department of Ecology is authorized by law to only enforce state laws.
- c. The tabulation below shows that the minimum pH of the three outfall tested has not fallen below 6.6 in the period from July 1, 200 until January 1, 2005. Months not tabulated were months of zero discharge.

Outfall	Parameter	Unit	Type	Reading	Date
	2 PH	S.U.	MIN	6.9	1-Oct-00
	2 PH	S.U.	MIN	7.1	1-Nov-00
	2 PH	S.U.	MIN	7.4	1-Dec-00
	2 PH	S.U.	MIN	7.4	1-Jan-01
	2 PH	S.U.	MIN	7.5	1-Feb-01
	2 PH	S.U.	MIN	7.2	1-Mar-01
	2 PH	S.U.	MIN	8.1	1-Apr-01
	2 PH	S.U.	MIN	7.7	1-May-01
	2 PH	S.U.	MIN	8	1-Jun-01
	2 PH	S.U.	MIN	7.1	1-Nov-01
	2 PH	S.U.	MIN	7.2	1-Dec-01
	2 PH	S.U.	MIN	6.6	1-Jan-02
	2 PH	S.U.	MIN	7.35	1-Feb-02
	2 PH	S.U.	MIN	7.3	1-Mar-02
	2 PH	S.U.	MIN	7.3	1-Apr-02
	2 PH	S.U.	MIN	7.37	1-May-02
	2 PH	S.U.	MIN	7.16	1-Dec-02
	2 PH	S.U.	MIN	7.14	1-Jan-03
	2 PH	S.U.	MIN	7.05	1-Feb-03
	2 PH	S.U.	MIN	6.6	1-Mar-03
	2 PH	S.U.	MIN	6.8	1-Apr-03
	2 PH	S.U.	MIN	7	1-May-03
	2 PH	S.U.	MIN	7.72	1-Oct-03
	2 PH	S.U.	MIN	6.6	1-Nov-03
	2 PH	S.U.	MIN	6.6	1-Dec-03
	2 PH	S.U.	MIN	7.01	1-Jan-04
	2 PH	S.U.	MIN	7.62	1-Feb-04
	2 PH	S.U.	MIN	8.15	1-Mar-04
	2 PH	S.U.	MIN	7.3	1-Apr-04
Outfall	Parameter	Unit	Type	Reading	Date
	2 PH	S.U.	MIN	7.65	1-May-04
	2 PH	S.U.	MIN	7.35	1-Sep-04
	2 PH	S.U.	MIN	7.66	1-Oct-04
	2 PH	S.U.	MIN	7.43	1-Nov-04
	2 PH	S.U.	MIN	6.8	1-Dec-04
	2 PH	S.U.	MIN	7.2	1-Jan-05
	3 PH	S.U.	MIN	7.6	1-Dec-00
	3 PH	S.U.	MIN	8.46	1-Jan-01
	3 PH	S.U.	MIN	8.6	1-Feb-01
	3 PH	S.U.	MIN	7.8	1-Mar-01
	3 PH	S.U.	MIN	7.4	1-Apr-01
	3 PH	S.U.	MIN	7.8	1-May-01

FACT SHEET FOR NPDES PERMIT NO. WA0037338
TRANSALTA CENTRALIA MINING LLC

	3 PH	S.U.	MIN	7.7	1-Oct-01
	3 PH	S.U.	MIN	7	1-Nov-01
	3 PH	S.U.	MIN	7.2	1-Dec-01
	3 PH	S.U.	MIN	6.7	1-Jan-02
	3 PH	S.U.	MIN	7.46	1-Feb-02
	3 PH	S.U.	MIN	6.82	1-Mar-02
	3 PH	S.U.	MIN	6.63	1-Apr-02
	3 PH	S.U.	MIN	7.15	1-May-02
	3 PH	S.U.	MIN	7.4	1-Dec-02
	3 PH	S.U.	MIN	6.75	1-Jan-03
	3 PH	S.U.	MIN	7.1	1-Feb-03
	3 PH	S.U.	MIN	6.9	1-Mar-03
	3 PH	S.U.	MIN	7.35	1-Apr-03
	3 PH	S.U.	MIN	6.84	1-May-03
	3 PH	S.U.	MIN	6.8	1-Oct-03
	3 PH	S.U.	MIN	6.32	1-Nov-03
	3 PH	S.U.	MIN	6.6	1-Dec-03
	3 PH	S.U.	MIN	6.81	1-Jan-04
	3 PH	S.U.	MIN	6.9	1-Feb-04
	3 PH	S.U.	MIN	7.95	1-Mar-04
	3 PH	S.U.	MIN	7.9	1-Apr-04
	3 PH	S.U.	MIN	7.6	1-May-04
	3 PH	S.U.	MIN	7.3	1-Sep-04
	3 PH	S.U.	MIN	6.8	1-Oct-04
	3 PH	S.U.	MIN	6.8	1-Nov-04
	3 PH	S.U.	MIN	6.78	1-Dec-04
	3 PH	S.U.	MIN	6.94	1-Jan-05
	4 PH	S.U.	MIN	7.6	1-Nov-00
	4 PH	S.U.	MIN	7.6	1-Dec-00
	4 PH	S.U.	MIN	7.2	1-Jan-01
	4 PH	S.U.	MIN	7.6	1-Feb-01
	4 PH	S.U.	MIN	7.1	1-Mar-01
	4 PH	S.U.	MIN	7.8	1-Apr-01
	4 PH	S.U.	MIN	7.8	1-May-01
	4 PH	S.U.	MIN	7.9	1-Jun-01
	4 PH	S.U.	MIN	7.3	1-Oct-01
	4 PH	S.U.	MIN	7.3	1-Nov-01
	4 PH	S.U.	MIN	7.1	1-Dec-01
	4 PH	S.U.	MIN	6.8	1-Jan-02
Outfall	Parameter	Unit	Type	Reading	Date
	4 PH	S.U.	MIN	7.4	1-Feb-02
	4 PH	S.U.	MIN	7.9	1-Mar-02
	4 PH	S.U.	MIN	7.2	1-Apr-02
	4 PH	S.U.	MIN	8.26	1-May-02
	4 PH	S.U.	MIN	7.12	1-Nov-02
	4 PH	S.U.	MIN	6.92	1-Dec-02
	4 PH	S.U.	MIN	6.73	1-Jan-03
	4 PH	S.U.	MIN	6.7	1-Feb-03
	4 PH	S.U.	MIN	7.4	1-Mar-03
	4 PH	S.U.	MIN	7.3	1-Apr-03
	4 PH	S.U.	MIN	7.5	1-May-03
	4 PH	S.U.	MIN	6.95	1-Oct-03

FACT SHEET FOR NPDES PERMIT NO. WA0037338
TRANSALTA CENTRALIA MINING LLC

4 PH	S.U.	MIN	6.7	1-Nov-03
4 PH	S.U.	MIN	6.92	1-Dec-03
4 PH	S.U.	MIN	6.73	1-Jan-04
4 PH	S.U.	MIN	7.6	1-Feb-04
4 PH	S.U.	MIN	7.72	1-Mar-04
4 PH	S.U.	MIN	7.5	1-Apr-04
4 PH	S.U.	MIN	7.4	1-May-04
4 PH	S.U.	MIN	7.9	1-Sep-04
4 PH	S.U.	MIN	7.26	1-Oct-04
4 PH	S.U.	MIN	7.25	1-Nov-04
4 PH	S.U.	MIN	7.21	1-Dec-04
4 PH	S.U.	MIN	7.07	1-Jan-05

Comment 3.

Given that sampling for background is mostly awkward if not impossible at most of the outfalls, it would be advantageous to assign a single maximum limit for turbidity for all but periods of excessive rainfall at outfalls where active mining operations are under way.

Response 3.

A performance limit based on the Ecology sand and gravel general permit AKART determination gives a limit of 25 NTU for inactive mining areas (outfalls 001, 002, 003, 004, 005, 006, 008, and 011) and a limit of 50 NTU for areas of active mining (outfalls 009 and 010). When a rainstorm of greater intensity than one and one-half inches in 24 hours occurs, the limit for the areas of active mining (outfalls 009 and 010) shall revert to a ten percent increase over background limit.